M/053/005

Tenneco Minerals
A Tenneco Company

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DOGM MINERALS PROGRAM FILE COPY

TENNECO

March 27, 1992

Mr. Mack Croft
State of Utah
Division of Water Quality
Department of Environmental Quality
Salt Lake City, Utah 84114-4870

RECEIVED
APR 03 1992
DIVISION OF OIL GAS & MINING

RE: Revision to Proposed Fourth Solution Pond
Goldstrike Mine

Dear Mr. Croft:

Enclosed please find two sets of revised drawings (do we have these??) on the proposed Rinse Water/Emergency Storage Pond. Tenneco Minerals' March 3, 1992 submittal indicated the pond sizing would be 1.5 million gallons, After further consideration, Tenneco Minerals proposed to increase this size to 2.9 million gallons. The side slopes will change from 3:1 to 2.5 to 1 but other than that, the material installation specifications will remain the same. After the pond is completed, as built drawings will be submitted to the Division.

Also enclosed are revised pond sizing calculations reflecting this increase. Since this new pond will be used for emergency situations, a safety factor of 1.4 is now provided instead of 1.1. If you have any questions on the above or the enclosed, please contact me.

Sincerely,

TENNECO MINERALS COMPANY

Ken A. Kluksdahl

Ken A. Kluksdahl
Mine Manager

cc: K. Bhayani - DWQ
L. Braxton - UDOGM
L. Gore - BLM

6/25 Still need these revised maps, not found in files. Call Tenneco for same. Health approval?

TENNECO MINERALS COMPANY
GOLDSTRIKE MINE

REVISED POND SIZING CALCULATIONS
(3/27/92)

Proposed Solution Storage Capacity:

Pregnant Solution Pond* (existing)	973,000 gal
Barren Solution Pond* (existing)	1,060,000 gal
Recycle/Neutralization Pond* (existing)	2,400,000 gal
Rinse Water/Emergency Pond (proposed)	2,900,000 gal
Subtotal	7,333,000 gal

(*Note: Current as built capacities excluding 2 ft minimum freeboard which extends just below the pond overflow pipe.)

Additional Storage Capacity in the Event of an Emergency:

Fresh Water Pond	668,000 gal
Subtotal	668,000 gal

Total Available Storage Capacity in an Emergency:

8,001,000 gal

REVISED OPERATING STORAGE CAPACITY

The following calculations determine the amount of storage capacity available under normal operating conditions during a 100 year, 24-hour storm event. These calculations are based only on the three process ponds and the rinse water/emergency pond since these ponds are designed to contain process solutions.

Factors:

- Plant and Rinse Circuit Operating Hours — 24 hr/day, 7 days/week
- Solution Application Rate: (this includes both primary leach circuit at 1000 gpm and recycle/neutralization circuit at 350 gpm and 500 gpm from the pad 1 rinse circuit.) — 1850 gpm
- Application Rate: — 0.003 gpm/ft^2
- Total surface Area Under Leach: — 14.1 acres

- Average Solution and Rinse Water Make-up — 180,000 gpd

- Leach Pad Margin Calculated Yield: (Calculated yield is 30.5 gal/ft, from previous analysis, times 7610 linear feet of pad perimeter.) — 232,000 gal

- 100 yr 24-hour storm event — 3.4 inches

- Area of Leach Pads (under leach) — 616,700 ft^2

- Area of Four Solution Ponds — 117,500 ft^2

Calculations:

1. Normal Operating Solution Pond Inventories:

Pregnant Solution Pond	250,000 gal
Barren Solution Pond	300,000 gal
Recycle/Neutralization Pond	200,000 gal
Rinse Water/Emergency Pond	50,000 gal
Total	800,000 gal

NOTE: Continuous 24-hour operation will allow for lowered process pond inventories due to the fact that daily draindown periods will not intentionally occur. A general assumption is that we will keep approximately 4 hours inventory in the pregnant solution pond and barren solution pond at a throughput of 1000 gpm and application rate of 1350 gpm, respectively, and approximately 9 hours inventory in the recycle/neutralization pond at an application rate of 350 gpm. The rinse water/emergency pond will normally contain 50,000 gallons for liner anchoring purposes.

2. 24-Hour Pad Draindown (assumes 100% of application rate not including make-up water):

1850 gpm x 60 min. x 24 hr = 2,664,000 gal

3. Stormwater Yield From Leaching:

3.4"/12 x 616,700 ft^2 x 7.48 gal/ft^3 = 1,307,000 gal

4. Pad Margin Precipitation Gains — 232,000 gal

5. Direct Pond Precipitation Gains:

3.4"/12 x 117,500 ft^2 x 7.48 gal/ft^3 = 249,000 gal

6. Summary:

Capacity of Four Solution Ponds:		7,333,000 gal
Less:		
1. Inventories		800,000 gal
2. Draindown		2,664,000 gal
3. Stormwater Yield - Leaching		1,307,000 gal
4. Stormwater - Pad Margin		232,000 gal
5. Stormwater - Ponds		249,000 gal
	Subtotal	5,252,000 gal

Capacity Remaining:

7,333,000 gal - 5,252,000 = 2,081,000 gal

Calculated Margin of Safety:

7,333,000/5,252,000 = 1.4

ADDITIONAL CAPACITY AVAILABLE IN THE EVENT OF AN EMERGENCY:

Fresh Water Pond Capacity:		668,000 gal
Less Inventory	-	400,000 gal
Less Precipitation Gain	-	34,000 gal
Subtotal		234,000 gal
Additional Available Emergency Storage:		234,000 gal